Gliris Romanorum et Pici murarii, quibus nonnullas alias observationes adiungo. ... Merops (murarius), cinerascens, rostro abdomine cauda alisque nigris, remigibusque primariis semicoccineis, rectricibus apice albentibus ... Habitat et nidificat in Arcibus elatioribus et desertis, nec non in turribus ... " ["Here is the description of the Dormouse of the Romans and of the Wallcreeper, to which I am adding some other observations ... Merops murarius, ashy coloured, bill, abdomen, tail and wings black, the primaries half scarlet, the rectrices white-tipped ... It inhabits and nests on the higher solitary fortresses, as well as on towers ... "].

A longer, detailed description followed. This was meticulous when giving body characters, and he obviously had a freshly killed specimen in winter plumage in front of him when writing the letter, since he was able to describe the shape of the nostrils, of the tongue and of the palate. A vivid report of the Wallcreeper's behaviour revealed that Scopoli had observed the bird in life personally: "Sub finem Autumni migrat solitarius, volatu vago, remigante, muto. Aedificia elatiora, turres et Arces adit, muris insidet, super hos saltitando reptat, fenestras et latebras recognoscit, araneas devorat, muscas segniores capit, inquietus, frigoris amans, numquam pinguescens." ["Towards the end of Autumn it migrates alone with a wandering, flapping, silent flight. It visits the higher buildings, towers and fortresses, sits on the walls, creeps on them hopping, explores windows and concealed places, devours spiders, catches the slower flies, restless, loving cold weather and never getting fat"].

On 17 May 1763 an enthusiastic Linnaeus replied from Uppsala, gratefully acknowledging Scopoli's helpful information: "Epistolam tuam V. A. d. 7 aprilis data rite accepi, ... perplacuit pulcherrima avis europaea Picus muralis dicta ..." ["I have safely received your letter dated 7th April, ... I liked very much the beautiful European bird called Picus muralis ..."].

Linnaeus included it as a new species under the name of *Certhia* muraria in his 12th edition of Systema Naturae (1766), where he acknowledged the information received. Later, Scopoli (1769) published a very similar diagnosis for *Certhia muraria*.

An interesting point concerns the type-locality of *Certhia muraria* Linnaeus 1766. Although briefly mentioning other authors, such as Gesner, Aldrovandi, Kramer and Brisson, Linnaeus clearly relied on Scopoli's contribution for the printed description of the Wallcreeper. Since Scopoli's specimen is stated to originate from Carniola, according to correspondence with Linnaeus, we believe that the Linnean type-locality ("*Habitat in Europae australis turribus*, *arcibus*") of *Tichodroma muraria muraria* (L.) can be restricted to Carniola in Slovenia.

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References:

Cobelli, G. & Delaiti, C. 1889. Lettere inedite di Carlo Linneo a Giovanni Antonio Scopoli. Tip. Roveretana, Rovereto.

Linnaeus, C. 1758. Systema Naturae per Regna Tria Naturae, secundum Classes, Genera, Species cum Characteribus, Differentiis, Synonymis, Locis. Tomus I. Editio Decima, Reformata. Laurentii Salvii, Holmiae.

Linnaeus, C. 1766. Systema Naturae per Regna Tria Naturae, secundum Classes, Genera, Species cum Characteribus, Differentiis, Synonymis, Locis. Tomus I. Editio Duodecima, Reformata. Laurentii Salvii, Holmiae.

Scopoli, G. A. 1769. Annus I Historico-Naturalis. Sumtib. Ch. G. Hilscheri, Lipsiae.

Scopoli, G. A. 1786-1788. Deliciae florae et faunae Insubricae. 3 vols. Typ. Reg. et Imp. Monasterii S. Salvatoris, Ticini.

Soban, D. 1995. Linné's letters to Scopoli 1761 – 1773. Prirodoslovno Drustvo Slovenije, Ljubljana.

Violani, C. & Zava, B. 1995. Carolus Linnaeus and the Edible Dormouse. *Hystrix* (n. s.) 6: 109–115.

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## Molecular probes for identifications of raptors

## by D. Parkin

Research into the Red Kite *Milvus milvus* at Nottingham resulted in the isolation of a clone DNA that is inherited in a sex-limited fashion. It reveals a multi-band profile that is transmitted *more or less* faithfully from mother to daughter. This 'matrilineal' pattern is typical for DNA that is sited on the female-specific (W) chromosome. Analysis of a series of unrelated female kites from Germany and Spain revealed that there were 20 different patterns among 27 nest sites. There was no evidence of a common pattern between the two regions.

A long series of females from Wales revealed only two profiles, suggesting that this population is distinctly less variable. This finding is supported by the analysis of multi-locus DNA profiles in kites from these three regions.

A single locus was analysed using an oligonucleotide probe. The number of alleles detected was significantly less in the birds from Wales, whereas those from Germany and Spain did not differ.

All these results suggest that Red Kites from Wales are genetically depauperate.

Interestingly, a southern isolate of the Welsh populations revealed a significant difference in genetic structure. First, the two matrilines differed in relative frequency, and second, the single locus data differed. The rarer of the matrilines was very similar to a German profile, suggesting the possibility that a bird from this region had